

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

- 5 1. A method for generating data to support fuel tax rebates, comprising the steps of:
 - providing at least one computing device containing geographic data regarding highways;
 - equipping a motor vehicle that consumes fuel with a
 - 10 positioning system for generating positioning data as to the latitude and longitude of the vehicle;
 - providing fuel consumption data and positioning data to the at least one computing device which, by comparing the positioning data with the geographic data regarding highways,
 - 15 determines when fuel is being consumed off-highway for which a tax fuel rebate can be claimed and maintains an accurate record of such off-highway use.
2. The method as defined in Claim 1, there being two
- 20 computing devices a stationary base computing device in which is stored geographic data and a mobile computing device positioned within the vehicle in which is stored fuel consumption data and positioning data, means being provided for data transfer between the mobile computing device and the
- 25 stationary base computing device.
3. The method as defined in Claim 1, the at least one computing device further containing geographic data regarding the boundaries of taxing jurisdictions and, by comparing the
- 30 positioning data with the geographic data regarding boundaries of taxing jurisdictions, determines a particular one of the taxing jurisdictions in which the fuel is being consumed.
- 35 4. The method as defined in Claim 1, the vehicle being

provided with fuel flow sensors including a first fuel flow sensor on a fuel feed line through which fuel passes from a fuel tank to a motor and a second fuel flow sensor on a fuel return line through which unconsumed fuel passes from the
5 motor back to the fuel tank.

5. The method as defined in Claim 1, the at least one computing device being coupled with and receiving data from an on-board diagnostics processor of the vehicle, which
10 permits calculation to be performed as to fuel consumption.

6. An apparatus for generating data to support fuel tax rebates, comprising in combination:

a stationary base computing device containing geographic data regarding highways;

5 a positioning system for generating positioning data as to the latitude and longitude of a motor vehicle;

means for collecting data on fuel consumption of the motor vehicle;

10 a mobile computing device positioned in the vehicle and adapted to monitor fuel consumed during operation of the vehicle and positioning data;

means for transferring data from the mobile computing device to the stationary base computing device, the stationary base computing device comparing the positioning
15 data with the geographic data regarding highways to determine when fuel is being consumed off-highway for which a tax fuel rebate can be claimed and maintain an accurate record of such off-highway use.

20 7. The apparatus as defined in Claim 6, wherein the stationary base computing device further contains geographic data regarding the boundaries of taxing jurisdictions and, by comparing the positioning data with the geographic data regarding boundaries of taxing jurisdictions, determines a
25 particular one of the taxing jurisdictions in which the fuel is being consumed.

8. The apparatus as defined in Claim 6, in combination with fuel flow sensors including a first fuel flow sensor on a
30 fuel feed line through which fuel passes from a fuel tank to a motor and a second fuel flow sensor on a fuel return line through which unconsumed fuel passes from the motor back to the fuel tank.

35 9. The apparatus as defined in Claim 6, in combination with

an on-board diagnostics processor of the vehicle, the mobile computing device being coupled with and receiving data from an on-board diagnostics processor of the vehicle, which permits the mobile computing device to perform calculations
5 of fuel consumption.